

Chapter 16

Organizational Change, Development, and Innovation

Hewlett-Packard Co.

In 1999, Carly Fiorina became the first outsider ever to be named CEO of the Hewlett-Packard Co. She was hired to turn around a company that had become sluggish and was in need of change, and to successfully execute one of the most audacious business transformations of all time. Her mandate was to breathe new life into a proud but aging company that was losing ground

to its younger rivals. In effect, she was hired as an agent of change and is a self-described “change CEO.”

As a new CEO with a mandate for change, Fiorina quickly made a number of sweeping changes that touched every facet of the company. One of the first things she did was transform HP into a Web services provider, providing all the gear that corporations need to do business on the Internet. She also implemented an “e-services” strategy in order to bring together HP’s collection of independent businesses into one powerful and profitable whole.

She revamped the company’s flat and decentralized organizational structure by collapsing 83 units into six centralized divisions in order to create a more effective selling organization. Instead of 83 autonomous business units, there are now three “front-end” organizations that sell the products and three “back-end” organizations that make them. The structure was also made more hierarchical and the executive council was given greater authority. Individual departments now have less autonomy and must coordinate their efforts. Important decisions are now made from the top of the organization rather than by consensus.



Learning Objectives

After reading Chapter 16, you should be able to:

- 1 Explain the environmental forces that motivate organizational change and describe the factors that organizations can change.
- 2 Explain how organizations learn and what makes an organization a *learning organization*.
- 3 Describe the basic change process and the issues that require attention at various stages of change.
- 4 Explain how organizations can deal with resistance to change.
- 5 Define *organizational development* and discuss its general philosophy.
- 6 Discuss team building, survey feedback, total quality management, and reengineering as organizational development efforts.
- 7 Discuss the problems involved in evaluating organizational development efforts.
- 8 Define *innovation* and discuss the factors that contribute to successful organizational innovation.
- 9 Understand the factors that help and hurt the diffusion of innovations.

Hewlett-Packard CEO Carly Fiorina made a number of sweeping changes that touched every facet of the company including the orchestration of the largest technology merger ever with Compaq Computer Corp.



Fiorina also replaced HP's profit-sharing plan with bonuses tied to company performance and based partly on market share and customer metrics. To boost innovation and reestablish the company as a leader in the development of exciting new products, she created an incentive program to pay researchers for each patent filing. This doubled the number of patents filed in 2001 from the previous year, making HP number three in the world.

She also initiated a number of actions to change the company's deep-seated egalitarian culture that had become cumbersome during the 1990s. She hired a local ad agency that helped her develop a manifesto called "Rules of the Garage," which contained 10 maxims that would redefine the meaning of "The HP Way," such as "The customer defines a job well done" and "Invent different ways of working." A commercial was also made in which Fiorina herself appeared, saying, "The company of Bill Hewlett and Dave Packard is being reinvented. The original startup will act like one again. Watch!"

In 2001, Fiorina embarked on the biggest and most controversial change initiative of her career when she announced plans to merge HP with Compaq Computer Corp. However, when the deal was made public, the reaction was immediate and negative. Fears of a shareholder revolt came true and HP shares plummeted. What followed was a very public and bitter fight between Fiorina and the children of the company's founders. To make matters worse, Walter Hewlett announced that he would vote his shares against the deal, and his opposition became a rallying point for HP employees who had lost faith in Fiorina's management. The infighting at HP was so severe that it was described as a corporate civil war.

To win the battle, Fiorina had to convince shareholders that the merger was the best thing for them and the company. She argued that the computer industry will soon commoditize and consolidate and, to stay ahead, HP needs to make a deal to take advantage of volume sales. In a major speech, she stated "To the skeptics who say it won't work, it won't sell, it won't succeed, it's not the HP Way, I say, 'You don't know the people of the new HP'." She even began to invoke the memories of the founders as justification for the merger by refer-

ring to a legendary Packard quote, “To remain static is to lose ground.” In the end, shareholders approved the \$19-billion merger by the slimmest of margins (51.4 percent), making it the largest technology merger ever.

Now that the merger is complete, some say that HP will never be the same. HP’s legendary formula for success of building the most innovative products with large margins will be replaced by an increased reliance on commodity hardware and low margins. There is also talk of a potential culture clash between HP’s congenial, egalitarian, close-knit culture and Compaq’s confrontational culture. There is also the lingering fact that most high-tech mergers fail.

One thing, however, is certain. HP is now a very different organization than it was five years ago. Gone is the consensus-based culture and a decentralized company that focused on products and engineering. Today, HP is a hard-driving, top-down organization that is focused on customers and sales. Although early reports suggest that the merger is working, only time will tell if it is a success.¹

This story reflects the themes of our chapter. Hewlett-Packard’s environment changed, and the company had to change with it to survive and prosper. This change required innovations in both products and management processes.

In this chapter, we will discuss the concept of organizational change, including the whys and whats of change. Then, we will consider the process by which change occurs and examine problems involved in managing change. Following this, we will define organizational development and explore several development strategies as well as innovation, a special class of organizational change.

The Concept of Organizational Change

Common experience indicates that organizations are far from static. Our favourite small restaurant experiences success and expands. We return for a visit to our alma mater and observe a variety of new programs and new buildings. The local Chevy dealer also begins to sell Geos. As consumers, we are aware that such changes may have a profound impact on our satisfaction with the product or service offered. By extension, we can also imagine that these changes have a strong impact on the people who work at the restaurant, university, or car dealership. In and of themselves, such changes are neither good nor bad. Rather, it is the way in which the changes are *implemented* and *managed* that is crucial to both customers and members. This is the focus of the present chapter.

Why Organizations Must Change

All organizations face two basic sources of pressure to change—external sources and internal sources.

In Chapter 15, we pointed out that organizations are open systems that take inputs from the environment, transform some of these inputs, and send them back

into the environment as outputs. Most organizations work hard to stabilize their inputs and outputs. For example, a manufacturing firm might use a variety of suppliers to avoid a shortage of raw materials and attempt to turn out quality products to ensure demand. However, there are limits on the extent to which such control over the environment can occur. In this case, environmental changes must be matched by organizational changes, if the organization is to remain effective. For example, consider the successful producer of record turntables in 1970. In only a few years, the turntable market virtually disappeared with the advent of reasonably priced cassette and CD players. If the firm was unable to anticipate this by developing a new product and a market, it surely ceased to exist.

Probably the best recent example of the impact of the external environment in stimulating organizational change is the increased competitiveness of business. Brought on, in part, by a more global economy, deregulation, and advanced technology, businesses have had to become, as the cliché goes, leaner and meaner. Companies such as IBM and GM have laid off thousands of employees. Many firms did away with layers of middle managers, developing flatter structures so as to be more responsive to competitive demands. Mergers, acquisitions, and joint ventures with foreign firms have become commonplace, as have less adversarial relationships with unions and suppliers. The merger between Hewlett-Packard and Compaq Computer is a good example of a merger between two competitors.

Change can also be provoked by forces in the internal environment of the organization. Low productivity, conflict, strikes, sabotage, and high absenteeism and turnover are some of the factors that signal to management that change is necessary. Very often, internal forces for change occur in response to organizational changes that are designed to deal with the external environment. Thus, many mergers and acquisitions that were to bolster the competitiveness of an organization have been followed by cultural conflict between the merged parties. This conflict often stimulates further changes that were not anticipated at the time of the merger.

The discussion of organizational change is traditional in organizational behaviour texts. However, the trends we are discussing here have truly magnified the importance of this topic. In contemporary organizations, much change is led by top management and involves sweeping modifications of a strategy. The entire organization is likely to be affected, and familiar employee values are likely to be challenged.² The effects of Carly Fiorina's changes at HP are a good example of this.

In spite of these trends toward change, the internal and external environments of various organizations will be more or less dynamic. In responding to this, organizations should differ in the amount of change they exhibit. Exhibit 16.1 shows that organizations in a dynamic environment must generally exhibit more change to be effective than those operating in a more stable environment. Also, change in and of itself is not a good thing, and organizations can exhibit too much change as well as too little. The company that is in constant flux fails to establish the regular patterns of organizational behaviour that are necessary for effectiveness.

What Organizations Can Change

In theory, organizations can change just about any aspect of their operations they wish. Since *change* is a broad concept, it is useful to identify several specific domains in which modifications can occur. Of course, the choice of *what* to change depends on a well-informed analysis of the internal and external forces signalling that change is necessary.³ Factors that can be changed include:

- *Goals and strategies.* Organizations frequently change the goals and the strategies they use to reach these goals. Expansion, the introduction of new products, and the pursuit of new markets represent such changes. Transforming HP into a Web services provider and changing HP's focus from products and engineering to sales and customers are good examples of a change in goals and strategies.

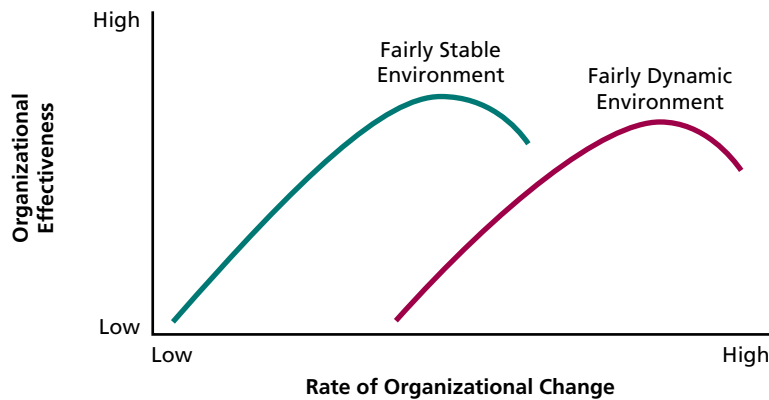


Exhibit 16.1
Relationships among
environmental change,
organizational change, and
organizational effectiveness.

- **Technology.** Technological changes can vary from minor to major. The introduction of online computer access for employees is a fairly minor change. Moving from a rigid assembly line to flexible manufacturing is a major change. At HP, the implementation of an e-services plan is a good example of a technological change.
- **Job design.** Companies can redesign individual groups of jobs to offer more or less variety, autonomy, identity, significance, and feedback, as we discussed in Chapter 6.
- **Structure.** Organizations can be modified from a functional to a product form or vice versa. Formalization and centralization can be manipulated, as can tallness, spans of control, and networking with other firms. Structural changes also include modifications in rules, policies, and procedures. Collapsing HP's 83 units into six centralized divisions is a good example of a structural change. HP's once flat and decentralized structure is now more hierarchical and centralized.
- **Processes.** The basic processes by which work is accomplished can be changed. For instance, some stages of a project might be done concurrently rather than sequentially. At HP, Carly Fiorina changed the decision making process from a consensual approach to a top-down approach. As a result, decisions are now made much more quickly.
- **Culture.** As we discussed in Chapter 8, organizational culture refers to the shared beliefs, values, and assumptions that exist in an organization. An organization's culture has a strong influence on the attitudes and behaviours of organizational members. As a result, one of the most important changes that an organization can make is to change its culture. In fact, culture change is so critical that the main reason reported for the failure of organizational change programs is the failure to change an organization's culture. In addition, because organizational culture is known to be a major factor in providing an organization with a competitive advantage and long-term effectiveness, changing an organization's culture is considered to be a fundamental aspect of organizational change.⁴

Carly Fiorina changed the long-time consensual, egalitarian, close-knit, relaxed engineering culture of HP to one that is more profit-focused and top-down and based on performance, self-motivation, and high achievement. In the old HP, layoffs were rare; now pink slips are common. Risk-taking which was once frowned upon is now encouraged.

- **People.** The membership of an organization can be changed in two senses. First, the actual *content* of the membership can be changed through a revised hiring process. This is often done to introduce "new blood" or to take advantage of

the opportunities that a more diverse labour pool offers. Second, the existing membership can be changed in terms of skills and attitudes by various training and development methods. At HP, the merger with Compaq brought in 65,000 new employees or, as Firoina described it, “new DNA.”

Three important points should be made about the various areas in which organizations can introduce change. First, a change in one area very often calls for changes in others. Failure to recognize this systemic nature of change can lead to severe problems. For example, consider the functionally organized East Coast chemical firm that decides to expand its operations to the West Coast. To be effective, this goal and strategy change might require some major structural changes, including a more geographic form and decentralization of decision-making power.

Second, changes in goals, strategies, technology, structure, process, job design, and culture almost always require that organizations give serious attention to people changes. As much as possible, necessary skills and favourable attitudes should be fostered *before* these changes are introduced. For example, although providing bank employees with a revised computer system is a fairly minor technological change, it might provoke anxiety on the part of those whose jobs are affected. Adequate technical training and clear, open communication about the change can do much to alleviate this anxiety.

Third, as indicated above, change requires employees to learn new skills and change their attitudes. However, in order for people to learn, organizations must also learn. After all, how can an organization change and improve itself without first learning something new? Without learning, neither individuals nor organizations can change, and both will simply repeat old practices and ways of doing things. In fact, many change programs fail because of the absence of learning.⁵ But just what is organizational learning?

Organizational learning refers to the process through which organizations acquire, develop, and transfer knowledge throughout the organization. There are two primary methods of organizational learning. First, organizations learn through *knowledge acquisition*. This involves the acquisition, distribution, and interpretation of knowledge that already exists but which is external to the organization. Second, organizations also learn through *knowledge development*. This involves the development of new knowledge that occurs in an organization primarily through dialogue and experience. Organizational learning occurs when organizational members interact and share experiences and knowledge, and through the distribution of new knowledge and information throughout the organization.⁶

Some organizations are better at learning than others because they have processes and systems in place to facilitate learning and the transfer of knowledge throughout the organization. These kinds of organizations are known as learning organizations. A **learning organization** is an organization that has systems and processes for creating, acquiring, and transferring knowledge in order to modify and change its behaviour to reflect new knowledge and insights.⁷ As a result, organizational change is much more likely to occur in a learning organization. In fact, it has even been suggested that a learning organization is “an organization that is adaptive in its capacity for change.”⁸

There are four key dimensions that are critical for a learning organization:⁹

- **Vision/support.** Leaders must communicate a clear vision of the organization’s strategy and goals in which learning is a critical part and key to organizational success.
- **Culture.** A learning organization has a culture that supports learning. Knowledge and information sharing, risk taking, and experimentation are supported, and continuous learning is considered to be a regular part of organizational life and the responsibility of everybody in the organization.

Organizational learning. The process through which an organization acquires, develops, and transfers knowledge throughout the organization.

Learning organization. An organization that has systems and processes for creating, acquiring, and transferring knowledge in order to modify and change its behaviour to reflect new knowledge and insights.

- *Learning systems/dynamics.* Employees are challenged to think, solve problems, make decisions, and act according to a systems approach by considering patterns of interdependencies and by “learning by doing.” Managers must be active in coaching, mentoring, and facilitating learning.
- *Knowledge management/infrastructure.* Learning organizations have established systems and structures to acquire, code, store, and distribute important information and knowledge so that it is available to those who need it, when they need it. This requires the integration of people, processes, and technology.

Research conducted by the Conference of Board Canada on learning organizations in Canada indicates that not very many Canadian organizations consider themselves to be learning organizations. In fact, the average organization-respondent rated itself as “somewhat” of a learning organization, and only 15 percent rated themselves “highly” as learning organizations. Approximately 30 percent of the respondents rated their organizations as very low. The research also showed that learning organizations are almost 50 percent more likely to have higher overall levels of profitability than those organizations not rated as learning organizations, and they are also better able to retain essential employees.¹⁰ A recent study also found a positive relationship between learning organization practices and a firm’s financial performance.¹¹

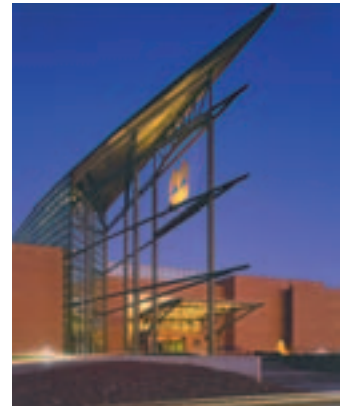
Some companies, like BMO Financial Group (formerly Bank of Montreal), have realized the strategic importance of learning and the link between learning and achieving business objectives; as such, they have created systems and processes to facilitate both. In 1994, the bank invested in the construction of the Institute for Learning, which continues to serve as the organization’s strategic learning base and a tangible symbol of BMO’s commitment to life-long learning. The Institute serves as an agent of strategic and cultural alignment by providing individuals and teams with opportunities to acquire corporate knowledge and perspective through the learning process, both in a centralized classroom and through distributed learning at or near the employee’s worksite, thereby increasing access to relevant learning.¹²

Learning organizations are better able to change and transform themselves due to their greater capacity for acquiring and transferring knowledge. Thus, learning is an important prerequisite for organizational change and transformation. In fact, change and improvement require a commitment to learning.¹³ Let us now consider the change process.

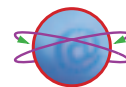
The Change Process

By definition, change involves a sequence of organizational events or a psychological process that occurs over time. The distinguished psychologist Kurt Lewin has suggested that this sequence or process involves three basic stages—unfreezing, changing, and refreezing.¹⁴

Unfreezing. **Unfreezing** occurs when recognition exists that some current state of affairs is unsatisfactory. This might involve the realization that the present structure, task design, or technology is ineffective, or that member skills or attitudes are inappropriate. *Crises* are especially likely to stimulate unfreezing. A dramatic drop in sales, a big lawsuit, or an unexpected strike are examples of such crises. At HP, Carly Fiorina voiced concerns that the company was not growing fast enough, wasn’t profitable enough, and that customers were unhappy. Unfreezing at Ontario Power Generation occurred when Ontario’s new Liberal government fired the company’s top three executives who were responsible for massive cost overruns in the rebuilding of the Pickering nuclear generating station. Talk about getting people’s attention! A visit to Honda’s American motorcycle plant by Harley-Davidson executives shocked them. The plant’s great efficiency was obtained without a computer and with very few support staff. The decline of McDonald’s share of fast-food sales

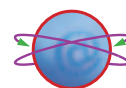


BMO Financial Group’s Institute for Learning serves as the organization’s strategic learning base and is a tangible symbol of the company’s commitment to life-long learning.



Bank of Montreal
www.bmo.com

Unfreezing. The recognition that some current state of affairs is unsatisfactory.



Ontario Power Generation
www.opg.com

was a key factor in stimulating unfreezing and change. Of course, unfreezing can also occur without crisis. Employee attitude surveys, customer surveys, and accounting data are often used to anticipate problems and to initiate change before crises are reached.

Change. The implementation of a program or plan to move the organization and/or its members to a more satisfactory state.

Change. Change occurs when some program or plan is implemented to move the organization and/or its members to a more satisfactory state. The terms *program* and *plan* are used rather loosely here, since some change efforts reveal inadequate planning. Change efforts can range from minor to major. A simple skills training program and a revised hiring procedure constitute fairly minor changes, in which few organizational members are involved. Conversely, major changes that involve many members might include extensive job enrichment, radical restructuring, or serious attempts at empowering the workforce. Changing the organizational structure, culture, and merging with Compaq are examples of major changes at HP.

Refreezing. The condition that exists when newly developed behaviours, attitudes, or structures become an enduring part of the organization.

Refreezing. When changes occur, the newly developed behaviours, attitudes, or structures must be subjected to **refreezing**—that is, they must become an enduring part of the organization. At this point, the effectiveness of the change can be examined, and the desirability of extending the change further can be considered. This of course is key to making the HP-Compaq merger a success. It should be emphasized that refreezing is a relative and temporary state of affairs.

Issues in the Change Process

The simple sketch of the change process presented in the preceding section ignores several important issues that organizations must confront during the process. These issues represent problems that must be overcome if the process is to be effective. Exhibit 16.2 illustrates the relationship between the stages of change and these problems, which include diagnosis, resistance, evaluation, and institutionalization.

Diagnosis

Diagnosis. The systematic collection of information relevant to impending organizational change.

Diagnosis is the systematic collection of information relevant to impending organizational change. Initial diagnosis can provide information that contributes to



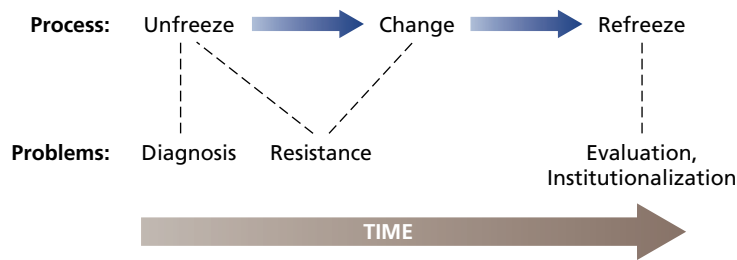


Exhibit 16.2
The change process and
change problems.

unfreezing by showing that a problem exists. Once unfreezing occurs, further diagnosis can clarify the problem and suggest just what changes should be implemented. It is one thing to feel that “hospital morale has fallen drastically” but quite another to be sure that this is true and to decide what to do about it.

Relatively routine diagnosis might be handled through existing channels. For example, suppose the director of a hospital laboratory believes that many of his lab technicians do not possess adequate technical skills. In conjunction with the hospital human resources manager, the director might arrange for a formal test of these skills. The hospital could devise a training program to correct inadequacies and establish a more stringent selection program to hire better personnel.

For more complex, nonroutine problems, there is considerable merit in seeking out the diagnostic skills of a change agent. **Change agents** are experts in the application of behavioural science knowledge to organizational diagnosis and change. Some large firms have in-house change agents who are available for consultation. In other cases, outside consultants might be brought in. In any event, the change agent brings an independent, objective perspective to the diagnosis, while working with the people who are about to undergo change.

It is possible to obtain diagnostic information through a combination of observations, interviews, questionnaires, and the scrutiny of records. Attention to the views of customers or clients is critical. As the next section will show, there is usually considerable merit in using questionnaires and interviews to involve the intended targets of change in the diagnostic process. The next section will also show why the change agent must be perceived as *trustworthy* by his or her clients.

The importance of careful diagnosis cannot be overemphasized. Proper diagnosis clarifies the problem and suggests *what* should be changed and the proper *strategy* for implementing change without resistance.¹⁵ Unfortunately, many firms have a tendency to imitate the change programs of their competitors or other visible firms without doing a careful diagnosis of their own specific needs. Similarly, managers sometimes confuse symptoms with underlying problems. This usually leads to trouble.

Resistance

As the saying goes, people are creatures of habit, and change is frequently resisted by those at whom it is targeted. More precisely, people may resist both unfreezing and change. At the unfreezing stage, defence mechanisms (Chapter 13) might be activated to deny or rationalize the signals that change is needed. Even if there is agreement that change is necessary, any specific plan for change might be resisted.

At HP, there was a great deal of resistance to Carly Fiorina’s plans for change. Although managers and employees did not openly attack her ideas, if they did not like what they heard they would simply ignore it. The resistance was subtle and pervasive.¹⁶ However, when she announced plans to merge with Compaq, she was met with fierce resistance from the founder’s families, shareholders, and employees. Many employees were concerned that the changes she was making would destroy the company’s cherished culture.

Change agents. Experts in the application of behavioural science knowledge to organizational diagnosis and change.

Resistance. Overt or covert failure by organizational members to support a change effort.

Causes of Resistance. Resistance to change occurs when people either overtly or covertly fail to support the change effort. Why does such failure of support occur? Several common reasons include the following:¹⁷

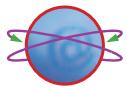
- *Politics and self-interest.* People might feel that they personally will lose status, power, or even their jobs with the advent of the change. At HP, individual departments did lose power and autonomy when the flat and decentralized structure was centralized and made more hierarchical.
- *Low individual tolerance for change.* Predispositions in personality might make some people uncomfortable with changes in established routines.
- *Misunderstanding.* The reason for the change or the exact course that the change will take might be misunderstood.
- *Lack of trust.* People might clearly understand the arguments being made for change but not trust the motives of those proposing the change. This might have contributed to employee resistance at HP. Many employees were upset because of pay cuts and layoffs that occurred prior to the merger, and some of the changes that Carly Fiorina made caused a great deal of confusion.¹⁸
- *Different assessments of the situation.* The targets of change might sincerely feel that the situation does not warrant the proposed change and that the advocates of change have misread the situation. (At UPS, managers saw the introduction of scanning bar-coded packages as a way to help customers trace goods. Employees saw it as a way to track them and spy on them.¹⁹) Some of those who opposed the HP-Compaq merger did not feel that it was good for HP and so they resisted it.
- *A resistant organizational culture.* Some organizational cultures have especially stressed and rewarded stability and tradition. Advocates of change in such cultures are viewed as misguided deviants or aberrant outsiders. (When deregulation forced massive changes at AT&T, the resistant traditionalists were labelled “bellheads” by the new guard!²⁰)

Underlying these various reasons for resistance are two major themes: (1) change is unnecessary because there is only a small gap between the organization's current identity and its ideal identity; and (2) change is unobtainable (and threatening) because the gap between the current and ideal identities is too large. Exhibit 16.3 shows that a moderate identity gap is probably most conducive to increased acceptance of change because it unfreezes people, while not provoking maximum resistance.²¹

Dealing with Resistance. Low tolerance for change is mainly an individual matter, and it can often be overcome with supportive, patient supervision.

If politics and self-interest are at the root of resistance, it might be possible to co-opt the reluctant by giving them a special, desirable role in the change process or by negotiating special incentives for change. For example, consider office computing. Many heads of information services resisted the proliferation of personal computers, feeling that this change would reduce their power as departments moved away from dependence on the mainframe. Some organizations countered this resistance by giving information services control over the purchase, maintenance, and networking of personal computers, providing an incentive for change.

If misunderstanding, lack of trust, or different assessments are provoking resistance, good communication can pay off. Contemporary organizations are learning that obsessive secrecy about strategy and competition can have more internal costs than external benefits. It is particularly critical that lower-level managers understand the diagnosis underlying intended change and the details of the change so that they can convey this information to employees accurately. Springing “secret” changes on employees, especially when these changes involve matters such as work-force reduction, is sure to provoke resistance.



UPS
www.ups.com

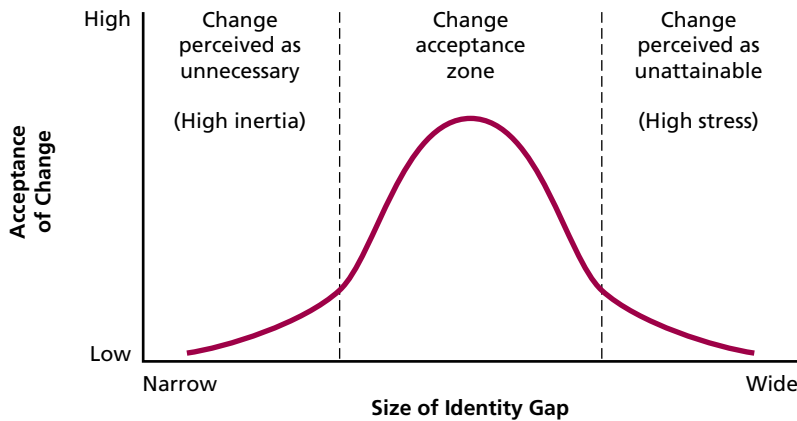


Exhibit 16.3
Probability of acceptance of change.

Source: Reger, R. K., Gustafson, L. T., DeMarie, S. M., & Mullane, J. V. (1994). Reframing the organization: Why implementing total quality is easier said than done. *Academy of Management Review*, 19, 565–584.

Involving the people who are the targets of change in the change process often reduces their resistance.²² This is especially appropriate when there is adequate time for participation, when true commitment (“ownership”) to the change is critical, and when the people who will be affected by the change have unique knowledge to offer.

Finally, transformational leaders (Chapter 9) are particularly adept at overcoming resistance to change. One way they accomplish this is by “striking while the iron is hot”—that is, by being especially sensitive to when followers are *ready* for change. For example, when Lee Iacocca became president of Chrysler, the situation was so bad that employees knew that change would have to occur. The other way is to unfreeze current thinking by installing practices that constantly examine and question the status quo. One research study of CEOs who were transformational leaders noted the following unfreezing practices:²³

- An atmosphere is established in which dissent is not only tolerated but encouraged. Proposals and ideas are given tough objective reviews, and disagreement is not viewed as disloyalty.
- The environment is scanned for objective information about the organization’s true performance. This might involve putting lots of outsiders on the board of directors or sending technical types out to meet customers.
- Organizational members are sent to other organizations and even other countries to see how things are done elsewhere.
- The organization compares itself along a wide range of criteria *against the competition*, rather than simply comparing its performance against last year’s. This avoids complacency.

Transformational leaders are skilled at using the new ideas that stem from these practices to create a revised vision for followers about what the organization can do or be. Often, a radically reshaped culture is the result. In the process, as we suggested in Chapter 9, they are good at inspiring trust and encouraging followers to subordinate their individual self-interests for the good of the organization. This combination of tactics keeps followers within the zone of acceptance shown in Exhibit 16.3.

Evaluation and Institutionalization

It seems only reasonable to evaluate changes to determine whether they accomplished what they were supposed to and whether that accomplishment is now considered adequate. Obviously, objective goals, such as return on investment or market share, might be easiest and most likely to be evaluated. Of course, organizational politics can intrude to cloud even the most objective evaluation.

Organizations are notorious for doing a weak job of evaluating “soft” change programs that involve skills, attitudes, and values. However, it is possible to do a thorough evaluation by considering a range of variables:

- Reactions—did participants like the change program?
- Learning—what was acquired in the program?
- Behaviour—what changes in job behaviour occurred?
- Outcomes—what changes in productivity, absence, etc. occurred?²⁴

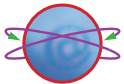
To some extent, reactions measure resistance, learning reflects change, and behaviour reflects successful refreezing. Outcomes indicate whether refreezing is useful for the organization. Unfortunately, many evaluations of change efforts never go beyond the measurement of reactions. Again, part of the reason for this may be political. The people who propose the change effort fear reprisal if failure occurs.

If the outcome of change is evaluated favourably, the organization will wish to institutionalize that change. This means that the change becomes a permanent part of the organizational system, a social fact that persists over time, despite possible turnover by the members who originally experienced the change.²⁵

Logic suggests that it should be fairly easy to institutionalize a change that has been deemed successful. However, we noted that many change efforts go unevaluated or are only weakly evaluated, and without hard proof of success, it is very easy for institutionalization to be rejected by disaffected parties. This is a special problem for extensive, broad-based change programs that call for a large amount of commitment from a variety of parties (e.g., extensive participation, job enrichment, or work restructuring). It is one thing to institutionalize a simple training program but quite another to do the same for complex interventions that can be judged from a variety of perspectives.

Studies of more complex change efforts indicate that a number of factors can inhibit institutionalization. For example, promised extrinsic rewards (such as pay bonuses) might not be developed to accompany changes. Similarly, initial changes might provide intrinsic rewards that create higher expectations that cannot be fulfilled. Institutionalization might also be damaged if new hires are not carefully socialized to understand the unique environment of the changed organization. As turnover occurs naturally, the change effort might backslide. In a similar vein, key management supporters of the change effort might resign or be transferred. Finally, environmental pressures, such as decreased sales or profits, can cause management to regress to more familiar behaviours and abandon change efforts.²⁶

It stands to reason that many of the problems of evaluation and institutionalization can be overcome by careful planning and goal setting during the diagnostic stage. In fact, *planning* is a key issue in any change effort. Let us now examine organizational development, a means of effecting planned change. But first, please consult the You Be the Manager feature, *The Transformation of the Harley-Davidson Motor Company* on page 528.



Harley-Davidson Motor Co.
www.harley-davidson.com

Organizational Development: Planned Organizational Change

Organizational development (OD). A planned, ongoing effort to change organizations to be more effective and more human.

Organizational development (OD) is a planned, ongoing effort to change organizations to be more effective and more human. It uses the knowledge of behavioural science to foster a culture of organizational self-examination and readiness for change. A strong emphasis is placed on interpersonal and group processes.²⁷

The fact that OD is *planned* distinguishes it from the haphazard, accidental, or routine changes that occur in all organizations. OD efforts tend to be *ongoing* in at least two senses. First, many OD programs extend over a long period of time,

involving several distinct phases of activities. Second, if OD becomes institutionalized, continual re-examination and readiness for further change become permanent parts of the culture. In trying to make organizations more *effective* and more *human*, OD gives recognition to the critical link between personal processes, such as leadership, decision making, and communication, and organizational outcomes, such as productivity and efficiency. The fact that OD uses *behavioural science knowledge* distinguishes it from other change strategies that rely solely on principles of accounting, finance, or engineering. However, an OD intervention may also incorporate these principles. OD seeks to modify *cultural norms and roles* so that the organization remains self-conscious and prepared for adaptation. Finally, a focus on *interpersonal* and *group* processes recognizes that all organizational change affects members, and their cooperation is necessary to implement change.

To summarize the above, we can say that OD recognizes that systematic attitude change must accompany changes in behaviour, whether these behaviour changes are required by revisions in tasks, work processes, organizational structure, or business strategies.

Traditionally, the values and assumptions of OD change agents were decidedly humanistic and democratic. Thus, self-actualization, trust, cooperation, and the open expression of feelings among all organizational members have been viewed as desirable.²⁸ In recent years, OD practitioners have shown a more active concern with organizational effectiveness and with using development practices to further the strategy of the organization. This joint concern with both people and performance has thus become the credo of many contemporary OD change agents. The focus has shifted from simple humanistic advocacy to generating data or alternatives that allow organizational members to make informed choices.²⁹

Some Specific Organizational Development Strategies

The organization that seeks to “develop itself” has recourse to a wide variety of specific techniques, and many have been used in combination. We discussed some of these techniques earlier in the book. For example, job enrichment and management by objectives (Chapter 6) are usually classed as OD efforts, as are diversity training (Chapter 3), self-managed and cross-functional teams (Chapter 7), and empowerment (Chapter 12). In this section, we will discuss four additional OD strategies that illustrate the diversity of the practice. Team building illustrates how work teams can be fine-tuned to work well together. Survey feedback shows how OD can be conceived of as an ongoing applied research effort. Total quality management shows how organizations can prepare themselves for continuous improvement. Finally, reengineering illustrates the radical redesign of organizational processes. The first two methods are limited in scope and are often a part of other change efforts. The second two methods are broader in scope and lead to more sweeping organizational change.

Team Building

Team building attempts to increase the effectiveness of work teams by improving interpersonal processes, goal clarification, and role clarification.³⁰ (What is our team trying to accomplish, and who is responsible for what?) As such, it can facilitate communication and coordination. The term *team* can refer to intact work groups, special task forces, new work units, or people from various parts of an organization who must work together to achieve a common goal.

Team building usually begins with a diagnostic session, often held away from the workplace, in which the team explores its current level of functioning. The team

Team building. An effort to increase the effectiveness of work teams by improving interpersonal processes, goal clarification, and role clarification.

You Be the Manager

Omitted Due to
Copyright Restrictions

You could tell
where a Harley
had been
parked by the
puddle of oil
on the
pavement.

The Transformation of the Harley-Davidson Motor Company

In 1981, a group of Harley executives purchased the company from AMF and an independent Harley-Davidson Motor Company was in business once again. With the Japanese still producing better bikes at a lower cost, a group of Harley executives toured Honda's assembly plant in Marysville, Ohio. Harley finally began to understand how the Japanese were beating them. But how should they change, and could they convince employees that they had to play the game the Japanese way?

By the late 1980s, Harley had transformed itself to become a symbol of the classic American turnaround. It has since experienced phenomenal growth. Market share rose to 51 percent by 1990 and to over 60 percent by 1993. Today, Harley Davidson is a \$4 billion-a-year company with 45 percent of the American heavyweight motorcycle market. Its market share and sales continue to increase in the face of a shrinking market. It ranks among America's top growth stocks since its first public offering in 1986 running just behind Microsoft. In 2002, the continued demand for its expensive motorcycles led to a record production of 262,000 machines and an all-time high in revenue for 2002's second quarter of more than a billion U.S. dollars. The company's major problem today is that it cannot make enough bikes to meet the demand.

The vice-president of sales sums up his philosophy and that of the Harley-Davidson Motor Company this way: "Success is a journey and not a destination. And the journey is never over."

Questions

1. What changes do you think Harley made as part of its "journey" back from the brink of bankruptcy?
2. How do you think Harley was able to overcome resistance to change?

To find out how Harley transformed itself, consult The Manager's Notebook at the end of the chapter.

The Harley-Davidson Motor Company began in 1903 in a shack behind the Davidson brothers' home. Their friend William Harley came up with the original design. In 1906, the company had one full-time employee who had, up to that point, built a total of 50 motorcycles. This compares with today's production of several hundred bikes per day. However, between the company's 1903 inception and the 1970s, production had rapidly expanded at the expense of quality. AMF, which owned Harley at the time, tripled production to 75,000 units annually over a period of four years. Quality began to deteriorate to the point that more than half the bikes came off the line missing parts. Dealers often had to fix the bikes in order to sell them and Harley earned a reputation for poor quality. The quality of the bikes was so bad that at one point it was said you could tell where a Harley had been parked by the puddle of oil on the pavement. Others joked that Harley owners had to own two bikes—one to ride and one for spare parts!

By the mid-1970s the situation became more critical when Japanese motorcycle makers, such as Honda and Yamaha, aggressively introduced high-quality state-of-the-art heavyweight machines in direct competition to Harley's once-exclusive market known as "Hog Heaven." Harley's share of the heavyweight motorcycle market eroded from 78 percent in 1973 to 31 percent in 1980 to 13 percent in 1983. The number of employees went from a peak of 4,000 in 1980 to 2,200 in 1982.

The Harley engine was also a problem. Not only did it leak oil and vibrate, but it was no match for the flawlessly smooth ride of the Japanese bikes that were more appealing to first-time buyers. The company nearly went bankrupt because of its outdated technology and a badly managed manufacturing process. It became clear that if Harley was going to survive, it would have to improve quality and update the design of its engine.

Sources: Boehme, C. (1991, November). Harley-Davidson's long marriage of mechanics and art. *World Vision*, 22-27; Reid, P. C. (1989, September 25). How Harley beat back the Japanese (Book excerpt). *Fortune*, 160-164; Boyd, M. (quote). (1993, September). Harley-Davidson Motor Company. *Incentive*, 26-31; Filipczak, B. (1996, February). Values keep Harley-Davidson on the road to success. *Training*, 38-42; Helyar, J. (2002, August 12). Will Harley-Davidson hit the wall? *Fortune*, 146(3), 120-124; Interview with Richard Teerlink. (1995, September). Circles and cycles. *Executive Excellence*, 6-7; Maska, B. S. (1993, August 2). Born to be real. *Industry Week*, 14-18; Reid, P. C. (1990). *Well made in America*. New York: McGraw-Hill; Richardson, M. (2002, September 29). Riding high. *The Toronto Star*, pp. C1, C3; Slutsker, B. (1993, May 24). Hog wild. *Forbes*, 45-46.

might use several sources of data to accomplish its diagnosis. Some data might be generated through sensitivity training, outdoor “survival” exercises (see “Global Focus: *Outdoor Training Culture Clash*”), or open-ended discussion sessions. In addition, “hard” data, such as attitude survey results and production figures, might be used. The goal at this stage is to paint a picture of the current strengths and weaknesses of the team. The ideal outcome of the diagnostic session is a list of needed changes to improve team functioning. Subsequent team-building sessions usually have a decidedly task-oriented slant—How can we actually implement the changes indicated by the diagnosis? Problem solving by subgroups might be used at this stage. Between the diagnostic and follow-up sessions, the change agent might hold confidential interviews with team members to anticipate implementation problems. Throughout, the change agent acts as a catalyst and resource person.

When team building is used to develop *new* work teams, the preliminary diagnostic session might involve attempts to clarify expected role relationships and additional training to build trust among team members. In subsequent sessions, the expected task environment might be simulated with role-playing exercises. One company used this integrated approach to develop the management team of a new plant.³¹ In the simulation portion of the development, typical problems encountered in opening a new plant were presented to team members via hypothetical in-basket memos and telephone calls. In role-playing the solutions to these problems, they reached agreement about how they would have to work together on the job and gained a clear understanding of each other’s competencies. Plant startups were always problem laden, but this was the smoothest in the history of the company.

Team building can also work to facilitate change. Harley-Davidson used it to introduce resistant middle managers to employee-involvement concepts. At Oldsmobile, select dealers who wished to sell the new Aurora had to participate in team building. One goal was to get them to adopt no-haggle pricing policies and not undercut each other’s prices. U.S. West Communications used team building to lead a geographically dispersed management group through a stressful downsizing and reorganization.³²

Ideally, team building is a continuing process that involves regular diagnostic sessions and further development exercises as needed. This permits the team to anticipate new problems and to avoid the tendency to regress to less effective pre-development habits.



Outdoor training programs are a popular method of team building in which team members participate in structured outdoor activities to improve their communication and coordination skills and learn how to work together as a team.

GLOBAL FOCUS

Outdoor Training Culture Clash

Many organizations are investing in outdoor training programs for individual managers, management teams, and work groups. Outdoor training has become one of the most popular techniques for team building.

More than 100 training organizations currently offer some type of outdoor training, also known as adventure or experiential learning. Such programs are designed to develop team and leadership skills through structured outdoor activities, such as rock climbing and white water river rafting, that require participants to learn how to work together as a team.

Participants include such varied groups as Fortune 100 executives, nurses, and civic group volunteers. Some organizations have even developed their own outdoor training programs, and others are sending managers “into the woods” as part of their traditional executive education programs.

But is outdoor training an effective technique for team building in all cultures? There is some evidence that participants from different cultures respond differently to outdoor training. While Canadians behave very much like Americans, British participants perceive the experience as too American and refer to it as “high fives huggy stuff” and “a lot of hooey.” Germans also respond this way, and Spanish participants tend to hide.

There is also some evidence that when there is only one or two participants from a particular

culture, such as British or German, among a group of participants that are primarily American, the British and German participants hold back because they do not do things the same way in their culture. However, when they are with their colleagues or with other Europeans, the wall is removed, and they become much more involved in the training experience.

Inspired by productivity improvements as a result of sending more than 50 senior managers through an outdoor training program, Fairmont Hotels and Resorts invited 21 important international clients to accompany sales representatives on a three-day, \$1,500-a-head outdoor training course in Whistler, British Columbia.

While the decision to invite clients from different cultures proved to be a success, particularly with the Japanese, it also showed a need for fine tuning. Some of the Europeans—in particular, the Germans—were uncomfortable with mushy displays of emotion. This has led to the belief that in dealing with some cultures, the program may have to be revised and adapted to the culture. For some cultures, outdoor training will have to remove the “huggy-feely-touchy stuff.”

Source: Excerpted from French, C. (1996, August 20). When cultures collide. *The Globe and Mail*, p. C1.

Survey Feedback

Survey feedback. The collection of data from organizational members and the provision of feedback about the results.

In bare-bones form, **survey feedback** involves collecting data from organizational members and feeding these data back to them in a series of meetings in which members explore and discuss the data.³³ The purpose of the meetings is to suggest or formulate changes that emerge from the data. In some respects, survey feedback is similar to team building. However, survey feedback places more emphasis on the collection of valid data and less emphasis on the interpersonal processes of specific work teams. Rather, it tends to focus on the relationship between organizational members and the larger organization.

As its name implies, survey feedback’s basic data generally consist of either interviews or questionnaires completed by organizational members. Before data are collected, a number of critical decisions must be made by the change agent and organizational management. First, who should participate in the survey? Sometimes, especially in large organizations, the survey could be restricted to particular departments, jobs, or organizational levels where problems exist. However, most survey feedback efforts attempt to cover the entire organization. This approach recognizes the systemic nature of organizations and permits a comparison of survey results across various subunits.

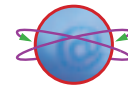
Second, should questionnaires or interviews be used to gather data? The key issues here are coverage and cost. It is generally conceded that *all* members of a target group should be surveyed. This procedure builds trust and confidence in

survey results. If the number of members is small, the change agent could conduct structured interviews with each person. Otherwise, cost considerations dictate the use of a questionnaire. In practice, this is the most typical data-gathering approach.

Finally, what questions should the survey ask? Two approaches are available. Some change agents use prepackaged, standardized surveys, such as the University of Michigan Survey of Organizations.³⁴ This questionnaire covers areas such as communication and decision-making practices and employee satisfaction. Such questionnaires are usually carefully constructed and permit comparisons with other organizations in which the survey has been conducted. However, there is some danger that prepackaged surveys might neglect critical areas for specific consideration and so many change agents choose to devise their own custom-tailored surveys.

Feedback seems to be most effective when it is presented to natural working units in face-to-face meetings. This method rules out presenting only written feedback or feedback that covers only the organization as a whole. In a manufacturing firm, a natural working unit might consist of a department, such as production or marketing. In a school district, such units might consist of individual schools. Many change agents prefer that the manager of the working unit conduct the feedback meeting. This demonstrates management commitment and acceptance of the data. The change agent attends such meetings and helps facilitate discussion of the data and plans for change.

IBM is one firm that has a very active employee survey program that it administers through its worldwide computerized office information system.³⁵ Travelling employees can log on and complete the survey wherever they are in the world, and “write in” comments are possible. The computerized format makes it very easy to custom-tailor questions by geographical region or occupational group. Because data collection and processing are part of the same system, analysis and feedback times are very short, sometimes only a matter of days.



IBM
www.ibm.com

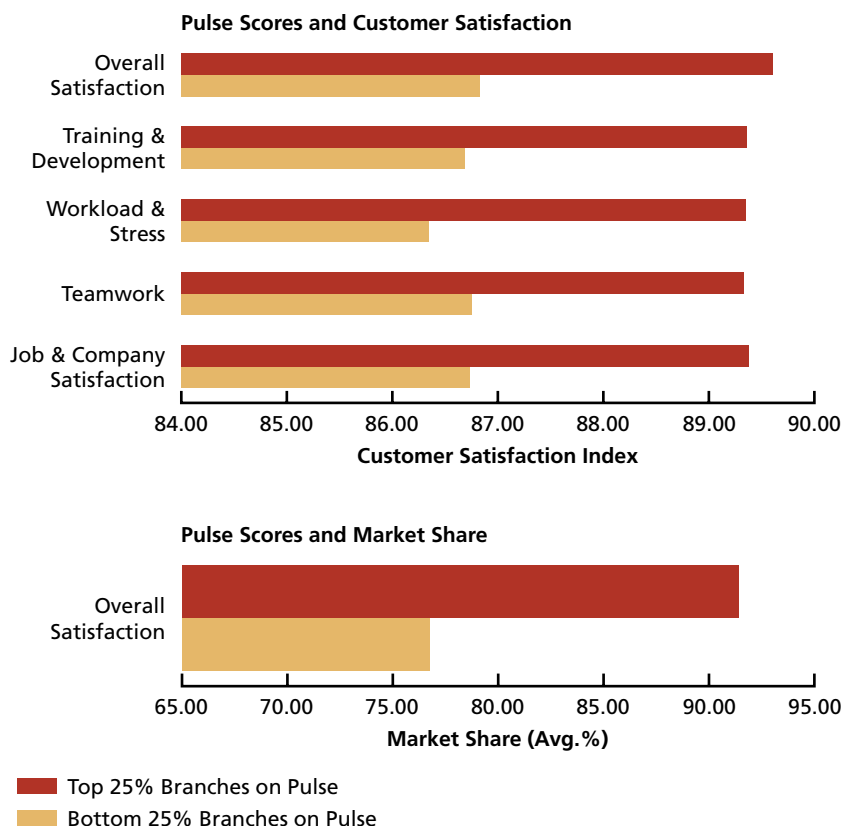


Exhibit 16.4
Relationship between Ford Pulse survey scores and customer satisfaction and market share at Ford Motor Credit branches.

Source: Johnson, R. H., Ryan, A. M., & Schmit, M. (1994). *Employee attitudes and branch performance at Ford Motor Credit*. Presentation at the annual conference of the Society for Industrial and Organizational Psychology, Nashville, Tennessee.

Ford Motor Company also has a comprehensive, worldwide employee attitude survey called Ford Pulse.³⁶ Sixty-five core questions that are linked to strategic issues are always completed by both salaried and hourly employees. Up to 35 supplemental questions are custom-developed to cover local issues. Ford validated the importance of the Pulse results at 147 Ford Credit branches in Canada and the United States. The results showed that branches with higher Pulse scores had higher customer satisfaction, market share, and business volume and lower loan delinquency and employee turnover. The top part of Exhibit 16.4 shows the association between several Pulse dimensions and customer satisfaction with the branch. The lower part shows the association between Pulse scores and market share. These kind of bottom-line results go a long way toward enhancing the credibility of the survey to managers and underlining the importance of accountability for “people issues.”

Total Quality Management

Total quality management (TQM). A systematic attempt to achieve continuous improvement in the quality of an organization's products and/or services.

Total quality management (TQM) is a systematic attempt to achieve continuous improvement in the quality of an organization's products and/or services. Typical characteristics of TQM programs include an obsession with customer satisfaction; a concern for good relations with suppliers; continuous improvement of work processes; the prevention of quality errors; frequent measurement and assessment; extensive training; and high employee involvement and teamwork.³⁷

Prominent names associated with the quality movement include W. Edwards Deming, Joseph Juran, and Philip Crosby.³⁸ Although each of these “quality gurus” advocates somewhat different paths to quality, all three are concerned with using teamwork to achieve continuous improvement to please customers. Exhibit 16.5 highlights the key principles underlying customer focus, continuous improvement, and teamwork. In turn, each of these principles is associated with certain practices and specific techniques that typify TQM.

	Customer Focus	Continuous Improvement	Teamwork
Principles	Paramount importance of providing products and services that fulfill customer needs; requires organizationwide focus on customers	Consistent customer satisfaction can be attained only through relentless improvement of processes that create products and services	Customer focus and continuous improvement are best achieved by collaboration throughout an organization as well as with customers and suppliers
Practices	Direct customer contact Collecting information about customer needs Using information to design and deliver products and services	Process analysis Reengineering Problem solving Plan/do/check/act	Search for arrangements that benefit all units involved in a process Formation of various types of teams Group skills training
Techniques	Customer surveys and focus groups Quality function deployment (translates customer information into product specifications)	Flowcharts Pareto analysis Statistical process control Fishbone diagrams	Organizational development methods such as the nominal group technique Team-building methods (e.g., role clarification and group feedback)

Exhibit 16.5

Principles, practices, and techniques of total quality management.

Source: Dean, J. W., Jr., & Bowen, D. E. (1994). Management theory and total quality: Improving research and practice through theory development. *Academy of Management Review*, 19, 392–418.

The concept of continuous improvement sometimes confuses students of TQM—how can something be more than 100 percent good? To clarify this, it is helpful to view improvement as a continuum ranging from responding to product or service problems (a reactive strategy) to creating new products or services that please customers (a proactive strategy). Exhibit 16.6 illustrates this continuum. Improvement can occur within each stage as well as between stages.³⁹

For example, suppose that you check into a hotel and find no towels in your room. Obviously, a fast and friendly correction of this error is better than a slow and surly response, and cutting response time from 15 minutes to 5 minutes would be a great improvement. Better yet, management will try to prevent missing-towel episodes altogether, perhaps using training to move from 96 percent toward 100 percent error-free towel stocking. Although such error *prevention* is a hallmark of TQM, it is also possible to upgrade the service episode. For example, the hotel might work closely with suppliers to provide fluffier towels at the same price or encourage guests to not use too many towels, thus reducing laundry and room costs. Finally, a new service opportunity might be identified and acted on. For example, the Chicago Marriott hotel discovered (after 15 years of operation) that 66 percent of all guests' calls to the housekeeping department were requests for irons or ironing boards. The manager took funds earmarked to replace black-and-white bathroom TVs with colour sets and instead equipped each room with an iron and ironing board. No one had ever complained about black-and-white TVs in the bathroom.⁴⁰

This chain of hotel examples illustrates several features of the continuous improvement concept and TQM in general.⁴¹ First, continuous improvement can come from small gains over time (e.g., gradually approaching 100 percent error-free room servicing) or from more radical innovation (e.g., offering a new service). In both cases, the goal is long-term improvement, not a short-term “fix.” Next, improvement requires knowing where we are in the first place. Thus, TQM is very concerned with measurement and data collection—in our examples, we alluded to speed of service, percent of error-free performance, and frequency of customer requests as examples. Next, TQM stresses teamwork among employees and (in the examples given here) with suppliers and customers. Finally, TQM relies heavily on training to achieve continuous improvement.

Although simple job training can contribute to continuous improvement (as in the towel-stocking example), TQM is particularly known for using specialized training in tools that empower employees to diagnose and solve quality problems on an ongoing basis. Some tools, noted in the bottom row of Exhibit 16.5, include:

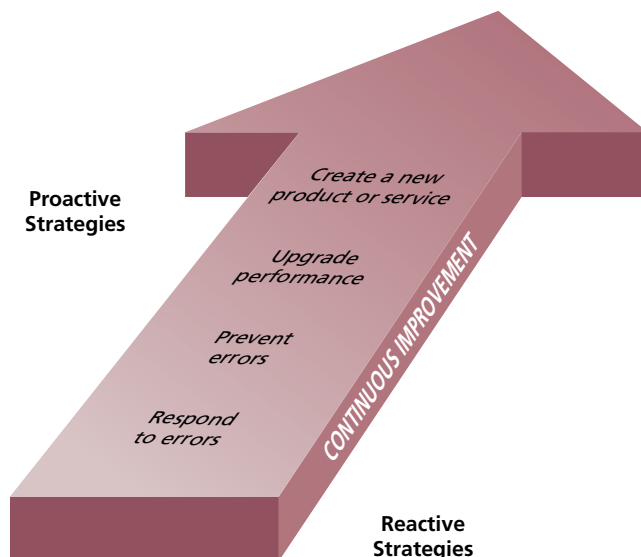


Exhibit 16.6
A continuum of continuous improvement.

Source: Adapted from Kinlaw, D. C. (1992). *Continuous improvement and measurement for total quality: A team-based approach*. San Diego: Pfeiffer.

- *Flowcharts of work processes.* Flowcharts illustrate graphically the operations and steps in accomplishing some task, noting who does what, and when. For instance, what happens when hotel housekeeping receives a guest request for towels?
- *Pareto analysis.* Pareto analysis collects frequency data on the causes of errors and problems, showing where attention should be directed for maximum improvement. For instance, the Marriott data on reasons for calls to housekeeping corresponds to Pareto data.
- *Fishbone diagrams.* Fishbone (cause-and-effect) diagrams illustrate graphically the factors that could contribute to a particular quality problem. Very specific causes (“small bones”) are divided into logical classes or groups (“large bones”). In the hotel example, classes of causes might include people, equipment, methods, and materials.
- *Statistical process control.* Statistical process control gives employees hard data about the quality of their own output that enables them to correct any deviations from standard. TQM places particular emphasis on reducing *variation* in performance over time.

These tools to improve the diagnosis and correction of quality problems will not have the desired impact if they fail to improve quality in the eyes of the customer. An essential problem here is that *quality* has many different and potentially incompatible definitions. For example, *ultimate excellence*, *value for the money*, *conformance to specifications*, or *meeting and/or exceeding customer expectations* are all potential definitions of quality.⁴² Although this last definition would seem to be closest to the TQM principle of customer focus, it is not without its weaknesses. For example, customers might have contradictory expectations. Also, they are more likely to have clear expectations about familiar products and services than new or creative products or services. Nevertheless, organizations with a real commitment to TQM make heavy use of customer surveys, focus groups, mystery shoppers, and customer clinics to stay close to their customers. Harley-Davidson holds customer clinics and sponsors bike rallies to learn from its customers. Also, survey feedback programs allow organizations to obtain information about internal customers (such as how the adjacent department views your department’s performance).

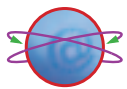
TQM programs reveal a large number of successes in firms such as Xerox, L.L. Bean, Motorola, and Ritz-Carlton Hotels. However, they have also had their share of problems, all of which ultimately get expressed as resistance. Despite allowing for radical innovation, TQM is mainly about achieving small gains over a long period of time. This long-term focus can be hard to maintain, especially if managers or employees expect extreme improvements in the short term.

Finally, a number of organizations have implemented TQM programs at the same time that they were engaged in radical restructuring or downsizing (e.g., IBM, GM, McDonnell Douglas). Speaking generally, this is not a good recipe for the success of the TQM effort. Employees are likely to be insecure during such periods and unreceptive to calls for initiative and innovation.⁴³ Cynics may say “the company cares about the customer more than it cares about me.”

Despite these problems, the quality movement continues to be one of the most popular of the more elaborate OD efforts.

Reengineering

Of all the forms of change that we are discussing in this chapter, reengineering is the most fundamental and radical. **Reengineering** is the radical redesign of organizational processes to achieve major improvements in factors such as time, cost, quality, or service.⁴⁴



L.L. Bean
www.llbean.com

Reengineering. The radical redesign of organizational processes to achieve major improvements in factors such as time, cost, quality, or service.

Reengineering does not fine tune existing jobs, structures, technology, or human resources policies. Rather, it uses a “clean slate” approach that asks basic questions, such as “What business are we really in?” and “If we were creating this organization today, what would it look like?” Then, jobs, structure, technology, and policy are redesigned around the answers to these questions. Reengineering can be applied to an entire organization, but it can also be applied to a major function, such as research and development.

A key word in our definition of reengineering, and one that requires some additional commentary, is *processes*. Processes do not refer to job titles or organizational departments. Rather, **organizational processes** are *activities* or *work* that the organization must accomplish to create outputs that customers (internal or external) value.⁴⁵ For example, designing a new product is a process that might involve people holding a variety of jobs in several different departments (R&D, marketing, production, and finance). In theory, the gains from reengineering will be greatest when the process is complex and cuts across a number of jobs and departments.

We can contrast reengineering with TQM, in that TQM usually seeks incremental improvements in existing processes rather than radical revisions of processes. However, a TQM effort could certainly be part of a reengineering project.

What factors have prompted interest in reengineering? One factor is “creeping bureaucracy,” which is especially common in large, established firms. With growth, rather than rethinking basic work processes, many firms have simply tacked on more bureaucratic controls to maintain order. This leads to overcomplicated processes and an internal focus on satisfying bureaucratic procedures rather than tending to the customer. Many corporate downsizings have been unsuccessful because they failed to confront bureaucratic controls and basic work processes.

New information technology has also stimulated reengineering. Many firms were disappointed that initial investments in information technology did not result in anticipated reductions in costs or improved productivity. This is because existing processes were simply automated rather than reengineered to correspond to the capabilities of the new technology. Now, it is commonly recognized that advanced technology allows organizations to radically modify (and usually radically simplify) important organizational processes. In other words, work is modified to fit technological capabilities rather than simply fitting the technology to existing jobs. At Ford Motor Company, for example, a look at the entire process for procuring supplies revealed great inefficiencies.⁴⁶ Ford employed a large accounts payable staff to issue payments to suppliers when it received invoices. Now, employees at the receiving dock can approve payment when the *goods* are received. Advanced information technology enables them to tap a database to verify that the goods were ordered and issue a check to the supplier. Needless to say, Ford has radically streamlined the payment process, and the accounts payable department now has fewer employees.

How does reengineering actually proceed? In essence, much reengineering is oriented toward one or both of the following goals:⁴⁷

- The number of mediating steps in a process is reduced, making the process more efficient.
- Collaboration among the people involved in the process is enhanced.

Removing the number of mediating steps in a process, if done properly, reduces labour requirements, removes redundancies, decreases chances for errors, and speeds up the production of the final output. All of this happened with Ford’s revision of its procurement process. Enhanced collaboration often permits simultaneous, rather than sequential, work on a process and reduces the chances for misunderstanding and conflict.

Some of the nitty gritty aspects of reengineering include the following practices. You will notice that we have covered many of them in other contexts earlier in the book.⁴⁸

Organizational processes.

Activities or work that have to be accomplished to create outputs that internal or external customers value.

- *Jobs are redesigned, and usually enriched.* Frequently, several jobs are combined into one to reduce mediating steps and provide greater employee control.
- *A strong emphasis is placed on teamwork.* Teamwork (especially cross-functional) is a potent method of enhancing collaboration.
- *Work is performed by the most logical people.* Some firms train customers to do minor maintenance and repairs themselves or turn over the management of some inventory to their suppliers.
- *Unnecessary checks and balances are removed.* When processes are simplified and employees are more collaborative, expensive and redundant controls can sometimes be removed.
- *Advanced technology is exploited.* Computerized technology not only permits combining of jobs, it also enhances collaboration via electronic mail, groupware, and so on.

It is easiest to get a feel for the success of reengineering by considering some of the reductions in mediating steps and improvements in speed that have resulted. CTB Macmillan/McGraw-Hill, a prominent publisher of standardized achievement tests, reduced the steps in its test scoring process from 154 to 68 and its turnaround time for scoring from 21 days to 5. Using software that allows clients to file electronic claims, Blue Cross of Washington and Alaska has handled 17 percent more volume with a 12 percent smaller workforce and halved the time it takes to handle a claim. Using cross-functional teams and advanced technology before its merger with Daimler-Benz, Chrysler cut the design time of its successful Jeep Cherokee from 5 years to 39 months.⁴⁹ Such “concurrent engineering” is now common in Detroit, enabling North American car manufacturers to approach the short product development cycle time for which the Japanese are noted. At The Limited, fashions now move from design to store in two months rather than the former two *seasons*. Thus, the firm is much more responsive to fickle swings in trends and taste. Computer technology, flatter structures, fewer “signoffs” on new ideas, and a sense of urgency on the part of management often play a role in such transformations.⁵⁰

Reengineering is most extensive in industries where (1) much creeping bureaucracy has set in, (2) large gains were available with advanced technology, and (3) deregulation increased the heat of competition. These include the insurance, banking, brokerage, and telecommunications industries.

Because reengineering has the goal of radical change, it requires strong CEO support and transformational leadership qualities. Also, before reengineering begins, it is essential that the organization clarify its overall strategy. What business should we really be in? (Do we want to produce hardware, software, or both?) Given this, who are our customers, and what core processes create value for them? If such strategic clarification is lacking, processes that do not matter to the customer will be reengineered. Strong CEO support and a clear strategy are important for overcoming resistance that simply dismisses people who advocate reengineering as “more efficiency experts.” Resistance due to self-interest and organizational politics is likely when radical change may lead to layoffs or major change in work responsibilities.

Recent research shows that reengineering must be both broad and deep to have long-lasting, bottom-line results—that is, it should span a large number of activities that cut costs or add customer value, and it should affect a number of elements including skills, values, roles, incentives, structure, and technology.⁵¹ Half-hearted attempts do not pay off.

Does Organizational Development Work?

Does it work? That is, do the benefits of OD outweigh the heavy investment of time, effort, and money? At the outset, we should reemphasize that most OD efforts are

not carefully evaluated. Political factors and budget limitations might be prime culprits, but the situation is not helped by some OD practitioners who argue that certain OD goals (e.g., making the organization more human) are incompatible with impersonal, scientifically rigorous evaluation.

At the very broadest level, two large-scale reviews of a wide variety of OD techniques (including some we discussed in this chapter as well as job redesign, MBO, and goal setting from Chapters 5 and 6) reached the following conclusions:⁵²

- Most OD techniques have a positive impact on productivity, job satisfaction, or other work attitudes.
- OD seems to work better for supervisors or managers than for blue-collar workers.
- Changes that use more than one technique seem to have more impact.
- There are great differences across sites in the success of OD interventions.

The last finding is probably due to differences in the skill and seriousness with which various organizations have undertaken OD projects. In addition, TQM and reengineering programs are most likely to be successful when they are accompanied by a change in organizational culture.⁵³

Exhibit 16.7 summarizes the results of a large number of research studies on the impact of OD change efforts on changes in a variety of outcomes. Organizational arrangements included changes in formal structure and some quality interventions. Social factors included the use of team building and survey feedback. Technology changes mainly involved job redesign. Finally, physical setting interventions (which were rare) included things such as changes to open-plan offices.

As you can see, a healthy percentage of studies reported positive changes following an OD effort. However, many studies also reported no change. This underlines the difficulty of introducing change, and it also suggests that variations in how organizations actually implement change may greatly determine its success. The relative lack of negative change is encouraging, but it is also possible that there is a bias against reporting bad outcomes.⁵⁴

Weak methodology has sometimes plagued research evaluations on the success of OD interventions, although the quality of research seems to be improving over time.⁵⁵ Some specific problems include the following:⁵⁶

- OD efforts involve a complex series of changes. There is little evidence of exactly which of these changes produce changes in processes or outcomes.

Omitted Due to
Copyright Restrictions

Exhibit 16.7
Organizational change due to
organizational development
efforts.

Source: Porras, J. I., & Robertson, P. J. (1992). Organizational development: Theory, practice, and research. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 3). Palo Alto, CA: Consulting Psychologists Press.

- Novelty effects or the fact that participants receive special treatment might produce short-term gains that really do not persist over time.
- Self-reports of changes after OD might involve unconscious attempts to please the change agent.
- Organizations may be reluctant to publicize failures.

For these reasons and others, OD continues to be characterized by both problems and promise. Let us hope that promise will overcome problems as organizations try to respond effectively to their increasingly complex and dynamic environments. Speaking of such response, let us turn to innovation.

The Innovation Process

Do you recognize the name Arthur Fry? Probably not. But Arthur Fry is famous in his own way as the inventor of the ubiquitous, sticky-backed Post-it notes, a top seller among paper office supplies. Fry, a researcher at the innovative 3M Company, developed the product that became Post-its in response to a personal problem—how to keep his place marker from falling out of his church choir hymnal.

What accounts for the ability of individuals such as Arthur Fry and organizations such as 3M to think up and exploit such innovative ideas? This is the focus of this section of the chapter.

What Is Innovation?

Innovation. The process of developing and implementing new ideas in an organization.

Innovation is the process of developing and implementing new ideas in an organization. The term *developing* is intentionally broad. It covers everything from the genuine invention of a new idea to recognizing an idea in the environment, importing it to the organization, and giving it a unique application.⁵⁷ The essential point is a degree of creativity. Arthur Fry did not invent glue, and he did not invent paper, but he did develop a creative way to use them together. Then 3M was creative enough to figure out how to market what might have appeared to less probing minds to be a pretty mundane product.

It is possible to roughly classify innovations as product (including service) innovations or process innovations.⁵⁸ *Product innovations* have a direct impact on the cost, quality, style, or availability of a product or service. Thus, they should be very obvious to clients or customers. It is easiest to identify with innovations that result in tangible products, especially everyday consumer products. Thus, we can surely recognize that digital cameras, DVDs, fax machines, and Post-it notes have been innovative products. Perhaps coming less readily to mind are service innovations, such as American Express Travellers Cheques (over 100 years old), FedEx door-to-door courier service, and 24-hour automated banking.

Process innovations are new ways of designing products, making products, or delivering services. In many cases, process changes are invisible to customers or clients, although they help the organization to perform more effectively or efficiently. Thus, new technology is a process innovation, whether it be new manufacturing technology or a new management information system. New forms of management and work organization, including job enrichment, participation, reengineering, and quality programs, are also process innovations.

Innovation is often conceived of as a stage-like process that begins with idea generation and proceeds to idea implementation. For some kinds of innovations, it is also hoped that the implemented innovation will diffuse to other sites or locations. This applies especially to process innovations that have begun as pilot or demonstration projects:



In advance of discussing these stages in the following sections, let us note several interesting themes that underlie the process of innovation. First, the beginning of innovation can be pretty haphazard and chaotic, and the conditions necessary to create new ideas might be very different from the conditions necessary to get these ideas implemented. In a related vein, although organizations have to innovate to survive, such innovation might be resisted just like any other organizational change. The result of these tensions is that innovation is frequently a highly political process (Chapter 12).⁵⁹ This important point is sometimes overlooked because innovation often involves science and technology, domains that have a connotation of rationality about them. However, both the champions of innovation and the resisters might behave politically to secure or hold onto critical organizational resources.

Generating and Implementing Innovative Ideas

Innovation requires creative ideas, someone to fight for these ideas, good communication, and the proper application of resources and rewards. Let us examine these factors in detail.

Individual Creativity. Creative thinking by individuals or small groups is at the core of the innovation process. **Creativity** is usually defined as the production of novel but potentially useful ideas. Thus, creativity is a key aspect of the “developing new ideas” part of our earlier definition of innovation. However, innovation is a broader concept, in that it also involves an attempt to implement new ideas. Not every creative idea gets implemented.

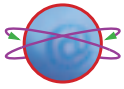
When we see a company, such as Hewlett-Packard, that is known for its innovations, or we see an innovative project completed successfully, we sometimes forget about the role that individual creativity plays in such innovations. However, organizations that have a consistent reputation for innovation have a talent for selecting, cultivating, and motivating creative individuals. Such creativity can come into play at many “locations” during the process of innovation. Thus, the salesperson who discovers a new market for a product might be just as creative as the scientist who developed the product.

What makes a person creative?⁶⁰ For one thing, you can pretty much discount the romantic notion of the naive creative genius. Research shows that creative people tend to have an excellent technical understanding of their domain—that is, they understand its basic practices, procedures, and techniques. Thus, creative chemists will emerge from those who are well trained and up-to-date in their field. Similarly, creative money managers will be among those who have a truly excellent grasp of finance and economics. Notice, however, that the fact that creative people have good skills in their area of specialty does not mean that they are extraordinarily intelligent. Once we get beyond subnormal intelligence, there is no correlation between level of intelligence and creativity.

Most people with good basic skills in their area are still not creative. What sets the creative people apart are additional *creativity-relevant* skills. These include the ability to tolerate ambiguity, withhold early judgment, see things in new ways, and be open to new and diverse experiences. Some of these skills appear to be a product of certain personality characteristics, such as curiosity and persistence. Interestingly, creative people tend to be socially skilled but lower than average in need for social approval. They can often interact well with others to learn and discuss new ideas, but they do not see fit to conform just to get others to like them.

Many creativity-related skills can actually be improved by training people to think in divergent ways and to withhold early evaluation of ideas.⁶¹ At Bombardier, employees learn how to use improvisation as a way to come up with creative ideas

Creativity. The production of novel but potentially useful ideas.



Frito-Lay
www.fritolay.com

DuPont
www.dupont.com

Idea champions. People who recognize an innovative idea and guide it to implementation.

and to encourage innovation.⁶² In addition, some of the methods we discussed in Chapter 11 (electronic brainstorming, nominal groups, and Delphi techniques) can be used to hone creative skills. Frito-Lay and DuPont are two companies that engage in extensive creativity training.

Finally, people can be experts in their field and have creativity skills but still not be creative if they lack intrinsic motivation for generating new ideas. Such motivation is most likely to occur when there is genuine interest in and fascination with the task at hand. This is not to say that extrinsic motivation is not important in innovation, as we shall see shortly. Rather, it means that creativity itself is not very susceptible to extrinsic rewards.

Having a lot of potentially creative individuals is no guarantee in itself that an organization will innovate. Let us now turn to some other factors that influence innovation. But first, consider “Applied Focus: *Creativity and Innovation at Corning Inc.*”

Idea Champions. Again and again, case studies of successful innovations reveal the presence of one or more **idea champions**, people who see the kernel of an innovative idea and help guide it through to implementation.⁶³ This role of idea champion is often an informal emergent role, and “guiding” the idea might involve talking it up to peers, selling it to management, garnering resources for its develop-

APPLIED FOCUS

Creativity and Innovation at Corning Inc.

When it comes to creativity and innovation, one would be hard pressed to find a more successful company than Corning Inc. For over 150 years, Corning has developed life-changing innovations, including the glass for Edison’s light bulb, ultra-thin glass for active-matrix liquid crystal displays, ceramic substrates for diesel and automotive emissions control, and the first commercially viable, low-loss fibre for use in telecommunications. Corning is a leading manufacturer of optical fibre and cable systems for the telecommunications industry, and high-performance flat glass for television and information display applications. It also is a leading manufacturer of lasers and amplifiers that make optical networks and the Internet work. The company employs approximately 22,000 employees worldwide and has consistently ranked in the top category in *Fortune* magazine’s list of the most admired companies.

Over its 150-year history, Corning has repeatedly been on the cutting edge of technologies that have changed the world. Over and over again, the company has created new innovations and then moved on to something else when the conditions have changed or when technology has been overtaken—a destroy-and-create strategy or what the company calls, “creative destruction.” But what has made Corning a great innovator and one of the most successful companies in the world?

To answer this question, one needs to first look at Corning’s Sullivan Park research facility, one of the

most creative places in the world, where 1,200 researchers work in seven buildings devoted to R&D. The space has been doubled in the past five years to accommodate a doubling of research funds and staff. Scientists at Corning participate in an R&D process that combines freedom with discipline. Scientists are given the freedom to exercise their curiosity and judgment, but they are accountable for their time every month.

Besides employing creative scientists, the company also has an innovation process that gets research into the marketplace as fast as possible. Corning has stripped out layers of bureaucracy that separated technologists from key decision-makers who control spending. It has also created a culture that encourages creativity, innovation, and cross-fertilization among disciplines. Corning’s culture encourages people to champion their ideas and scientists are “required” to spend 10 percent of their time pursuing crazy ideas, something that they refer to as “Friday afternoon experiments.”

Corning is so committed to innovation that it has created a formal five-step innovation process of how an idea is transformed into a profitable product. The process, from inspiration to earnings, is part of the culture at Sullivan Park and includes the following steps:

1. *An idea or an inspiration forms.* Before going much further, a team builds up as much preliminary knowledge as possible.

ment, or protecting it from political attack by guardians of the status quo. Champions often have a real sense of mission about the innovation. Idea champions have frequently been given other labels, some of which depend on the exact context or content of the innovation. For example, in larger organizations, such champions might be labelled *intrapreneurs* or *corporate entrepreneurs*. In R&D settings, one often hears the term *project champion*; *product champion* is another familiar moniker. The exact label is less important than the function, which is one of sponsorship and support, often outside of routine job duties.

For a modest innovation whose merits are extremely clear, it is possible for the creative person who thinks up the idea to serve as its sole champion and to push the idea into practice. In the case of more complex and radical innovations, especially those that demand heavy resource commitment, it is common to see more than one idea champion emerge during the innovation process. For example, a laser scientist might invent a new twist to laser technology and champion the technical idea within her R&D lab. In turn, a product division line manager might hear of the technical innovation and offer to provide sponsorship to develop it into an actual commercial product. This joint emergence of a technical champion and a management champion is typical. Additional idea champions might also emerge. For example, a sales manager in the medical division might lobby to import the innovation from the optics division.

2. *Experimentation tests the feasibility of the idea.* Is it borne out in the lab? Is there a reasonable product possible from the idea?
3. *Feasibility is one thing—practicality is another.* At this point, an idea has morphed into a product, and there is a formal team working to overcome manufacturing and marketing hurdles.
4. *Production and profitability are explored.* Even if a good idea becomes a good product, can it be manufactured reliably? Can it be produced at a cost that will allow it to earn a profit in the market?
5. *Profitability is examined in light of the product life cycle.* Once a product is on the market, how do you stay ahead of the competition? This question may take the R&D staff back to Step 1.

At each stage of the innovation process, formal project teams are formed that consist of R&D people as well as manufacturing and business staff members. And in order to ensure that creative ideas are turned into actual products, scientists who come up with creative ideas often participate in the commercial application phase of the process in which they participate in helping to find ways to actually manufacture a product for customers. In addition, people play specific roles in projects, including the role of “champion” for an idea.

Communication is also an important part of the innovation process at Corning. There is a constant flow of communication about problems and opportunities between R&D and business units. Communication takes place between factories and researchers, and between scientists and business managers. Scientists constantly transmit and reinterpret the culture by telling each other stories of their successes and failures.

Corning’s commitment to innovation is also supported by large investments and resources. In 1997, the company doubled its R&D spending, and by 1999 it was up to \$378 million a year. The company now invests \$725 million a year or about 8 percent of sales on R&D. In addition, Corning scientists are provided with all the equipment, lab space, and technicians they need to conduct their experiments.

Today, Corning is a technology powerhouse, pumping out wave after wave of optical technologies, sometimes in six to nine months, which is lightning-fast compared to other companies’ time-to-market period of three to five years. Amazingly, most of the products that Corning sells (84 percent in 2000) have been introduced in the last four years.

Sources: Fishman, C. (2000, November). Creative tension. *Fast Company*, 40, 358–388; Holstein, W. J. (2001, May 1). Dump the cookware. *Business 2.0*, 2(5), 68–73; and www.corning.com.

What kind of people are idea champions, and what are their tactics? One interesting study examined champions who spearheaded the introduction of expensive, visible new information technologies in their firms (e.g., new management information systems).⁶⁴ This research compared “project champions” with nonchampions who had also worked on the same project. The champions tended to exhibit more risk-taking and innovative behaviours. Also, they exhibited clear signs of transformational leadership (Chapter 9), using charisma, inspiration, and intellectual stimulation to get people to see the potential of the innovation. They used a wide variety of influence tactics to gain support for the new system. In short, the champions made people truly *want* the innovation despite its disruption of the status quo.

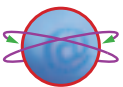
Communication. Effective communication with the external environment and effective communication within the organization are vital for successful innovation.

The most innovative firms seem to be those that are best at recognizing the relevance of new, external information, importing and assimilating this information, and then applying it.⁶⁵ You might recall from earlier in the chapter that such processes are consistent with organizational learning. Experience shows that the recognition and assimilation are a lot more chaotic and informal than one might imagine. Rather than relying on a formal network of journal articles, technical reports, and internal memoranda, technical personnel are more likely to be exposed to new ideas via informal oral communication networks. In these networks, key personnel function as **gatekeepers** who span the boundary between the organization and the environment, importing new information, translating it for local use, and disseminating it to project members. These people tend to have well-developed communication networks with other professionals outside the organization and with the professionals on their own team or project. Thus, they are in key positions to both receive and transmit new technical information.⁶⁶ Also, they are perceived as highly competent and as a good source of new ideas. Furthermore, they have an innovative orientation, they read extensively, and they can tolerate ambiguity.⁶⁷ It is important to note that gatekeeping is essentially an informal, emergent role, since many gatekeepers are not in supervisory positions. However, organizations can do several things to enhance the external contact of actual or potential gatekeepers. Generous allowances for subscriptions, telephone use, and database access might be helpful. The same applies to travel allowances for seminars, short courses, and professional meetings.

Technical gatekeepers are not the only means of extracting information from the environment. Many successful innovative firms excel at going directly to users, clients, or customers to obtain ideas for product or service innovation. This works against the development of technically sound ideas that nobody wants, and it also provides some real focus for getting ideas implemented quickly. For example, Sony requires new employees in technical areas to do a stint in retail sales, and Raytheon’s New Products Centre organizes expeditions by technical types to trade shows, manufacturing facilities, and retail outlets.⁶⁸ Willie G. Davidson, chief designer and grandson of one of the founders of Harley-Davidson, gets ideas from customers at Harley-Davidson bike rallies where he is often seen walking around with a notebook in hand and having one-on-one sessions with customers.⁶⁹ Notice that we are speaking here about truly getting “close to the customer,” not simply doing abstract market research on large samples of people. Such research does not have a great track record in prompting innovation; talking directly to users does.

Now that we have covered the importation of information into the organization, what are the requirements of *internal* communication for innovation? At least during the idea generation and early design phase, the more the better. Thus, it is generally true that organic structures (Chapter 14) facilitate innovation.⁷⁰ Decentralization, informality, and a lack of bureaucracy all foster the exchange of information that innovation requires. To this mixture, add small project teams or

Gatekeepers. People who span organizational boundaries to import new information, translate it for local use, and disseminate it.



Raytheon
www.raytheon.com

business units and a diversity of member backgrounds to stimulate cross-fertilization of ideas.

In general, internal communication can be stimulated with in-house training, cross-functional transfers, and varied job assignments.⁷¹ One study even found that the actual physical location of gatekeepers was important to their ability to convey new information to co-workers.⁷² This suggests the clustering of offices and the use of common lounge areas as a means of facilitating communication. Organizations could also give equal thought to the design of electronic communication media.

One especially interesting line of research suggests just how important communication is to the performance of research and development project groups.⁷³ This research found that groups with members who had worked together a short time or a long time engaged in less communication (within the group, within the organization, and externally) than groups that had medium longevity. In turn, performance mirrored communication, the high-communicating, medium-longevity groups being the best performers (Exhibit 16.8). Evidently, when groups are new, it takes time for members to decide what information they require and to forge the appropriate communication networks. When groups get “old,” they sometimes get comfortable and isolate themselves from critical sources of feedback. It is important to emphasize that the age of the group is at issue here, not the age of the employees or their tenure in the organization.

Although organic structures seem best in the idea generation and design phases of innovation, more mechanistic structures might sometimes be better for actually implementing innovations.⁷⁴ Thinking up new computer programs is an organic task. Reproducing these programs in the thousands and marketing them require more bureaucratic procedures. This transition is important. Although audio and video recording innovations were pioneered in the United States, it was the Japanese who successfully implemented recording products in the marketplace. In part, this stemmed from a recognition of the different organizational requirements for idea generation versus the implementation of ideas.

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Exhibit 16.8
Group longevity,
communication, and
performance of research and
development groups.

From Ralph Katz, “The effects of group longevity on project communication and performance,” Figure 3: Standardized performance and communication means as a function of group longevity. *Administrative Science Quarterly*, vol. 27, no. 1 (March 1992), p. 96. Reprinted with permission.

Resources and Rewards. Despite the romance surrounding the development of innovations on a shoestring using unauthorized “bootlegged” funds, abundant resources greatly enhance the chances of successful innovation.⁷⁵ Not only do these resources provide funds in the obvious sense, they also serve as a strong cultural symbol that the organization truly supports innovation. Recall that one of the changes Carly Fiorina made at HP was to implement an incentive program to pay researchers for each patent they filed. This resulted in a doubling of the patents filed in 2001 compared to the previous year. In August of 2003, HP unveiled 158 new products, including digital cameras, laptops, and lightweight printers. The company will spend \$300 million to market them.⁷⁶

Funds for innovation are seen as an *investment*, not a *cost*. Several observers have noted that such a culture is most likely when the availability of funding is anarchic and multisourced—that is, because innovative ideas often encounter resistance from the status quo under the best of circumstances, innovators should have the opportunity to seek support from more than one source. At 3M, for instance, intrapreneurs can seek support from their own division, from another division, from corporate R&D, or from a new ventures group.⁷⁷ (Notice how other idea champions might be cultivated during this process.)

Money is not the only resource that spurs innovation. *Time* can be an even more crucial factor for some innovations. At 3M, tradition dictates that scientists reserve 15 percent of their working time for personal projects.⁷⁸

Reward systems must match the culture that is seeded by the resource system. Coming up with new ideas is no easy job, so organizations should avoid punishing failure. Many false starts with dead ends will be encountered, and innovators need support and constructive criticism, not punishment. In fact, Hallmark puts its executives through a simulation in which they must design a line of greeting cards so that they can better appreciate the frustrations felt by the creative staff.

A survey of research scientists found that freedom and autonomy were the *most* cited organizational factors leading to creativity.⁷⁹ Since intrinsic motivation is necessary for creativity, these results support rewarding good past performance with enhanced freedom to pursue personal ideas. IBM, for example, has a “fellows program” that provides star performers five years of freedom to work on their own projects. In a related vein, many organizations have wised up about extrinsic rewards and innovation. In the past, it was common for creative scientists and engineers to have to move into management ranks to obtain raises and promotions. Many firms now offer dual career ladders that enable these people to be extrinsically rewarded while still doing actual science or engineering.

We have been concerned here mainly with rewarding the people who actually generate innovative ideas. But how about those other champions who sponsor such ideas and push them into the implementation stage? At 3M, bonuses for division managers are contingent on 25 percent of their revenues coming from products that are less than five years old.⁸⁰ This stimulates the managers to pay attention when someone drops by with a new idea, and it also stimulates them to turn that new idea into a real product quickly!

Diffusing Innovative Ideas

Many innovations, especially process innovations, begin as limited experiments in one section or division of an organization. This is a cautious and reasonable approach. For example, a company might introduce new automated technology for evaluation in one plant of its multiplant organization. Similarly, an insurance company might begin a limited exploration of job enrichment by concentrating only on clerical jobs at the head office. If such efforts are judged successful, it seems logical to extend them to other parts of the organization. **Diffusion** is the process by which innovations move through an organization. However, this is not always as easy as it might seem!

Diffusion. The process by which innovations move through an organization.

Richard Walton of Harvard University studied the diffusion of eight major process innovations in firms such as Volvo, Alcan, General Foods, Corning Glass, and Shell U.K. Each effort was rigorous and broad based, generally including changes in job design, compensation, and supervision.⁸¹

All the pilot projects that Walton studied were initially judged successful, and each received substantial publicity, a factor that often contributes to increased commitment to further change. Despite this, substantial diffusion occurred in only one of the observed firms—Volvo. What accounts for this poor record of diffusion? Walton identified these factors:

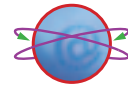
- Lack of support and commitment from top management.
- Significant differences between the technology or setting of the pilot project and those of other units in the organization, raising arguments that “it won’t work here.”
- Attempts to diffuse particular *techniques* rather than *goals* that could be tailored to other situations.
- Management reward systems that concentrate on traditional performance measures, while ignoring success at implementing innovation.
- Union resistance to extending the negotiated “exceptions” in the pilot project.
- Fears that pilot projects begun in non-unionized locations could not be implemented in unionized portions of the firm.
- Conflict between the pilot project and the bureaucratic structures in the rest of the firm (e.g., pay policies and staffing requirements).

Because of these problems, Walton raises the depressing spectre of a “diffuse or die” principle. That is, if diffusion does not occur, the pilot project and its leaders become more and more isolated from the mainstream of the organization and less and less able to proceed alone. As we noted earlier, innovation can be a highly politicized process. Several of the barriers to diffusion that Walton cites have been implicated in limiting the influence that the Saturn project has had on General Motors, including top management changes, union resistance, and competition for resources from old line GM divisions.

One classic study suggests that the following factors are critical determinants of the rate of diffusion of a wide variety of innovations:⁸²

- *Relative advantage.* Diffusion is more likely when the new idea is perceived as truly better than the one it replaces.
- *Compatibility.* Diffusion is easier when the innovation is compatible with the values, beliefs, needs, and current practices of potential new adopters.
- *Complexity.* Complex innovations that are fairly difficult to comprehend and use are less likely to diffuse.
- *Trialability.* If an innovation can be given a limited trial run, its chances of diffusion will be improved.
- *Observability.* When the consequences of an innovation are more visible, diffusion will be more likely to occur.

In combination, these determinants suggest that there is considerable advantage to thinking about how innovations are “packaged” and “sold” so as to increase their chances of more widespread adoption. Also, they suggest the value of finding strong champions to sponsor the innovation at the new site.



Volvo
www.volvo.com

the manager's Notebook

The Transformation of the Harley-Davidson Motor Company

1. Harley-Davidson knew that it had a serious product problem and that it had to focus on product quality. Following the purchase of the company from AMF, attention was directed at improving the product. In 1981, management began to examine the management and manufacturing techniques used by the Japanese. A 10-year plan was formulated to improve engines to provide better performance and attract new customers by offering the same quality as the Japanese bikes. The company began by designing quality into a new engine configuration and into all the manufacturing processes. To accomplish these goals, Harley adapted three Japanese quality techniques that were seldom used at the time in North America: (1) intensive employee involvement in decision making, (2) just-in-time inventory control to reduce expensive parts inventories and deliver parts to the assembly when needed, and (3) statistical operator control, which enables employees to measure and manage the quality of their own production. Employees were taught how to use statistical tools to monitor and control the quality of their work. In combination, these three techniques formed the Productivity Triad and were responsible for the dramatic improvement in quality and cost reductions that were the foundation of Harley's turnaround. Harley is known today as one of the first victories of the

American quality movement and one of the most dramatic. Poor quality almost destroyed the company. Not surprisingly, Harley-Davidson has become a poster child for total quality management (TQM). In 2003, the company celebrated its 100th anniversary.

2. When Harley employees were first told about the plan to convert to a just-in-time inventory program, many laughed out loud and managers reacted with disbelief. It was then decided that employee involvement would be key to the success of any changes. Employees were involved from the start in planning and designing the new system and in working out the details. The company sought the advice of employees on how to solve production problems at the lowest levels. For months, management held meetings with groups of employees from all departments in the company. Changes were implemented only when those involved understood and accepted them. The go-ahead for the change program came only after a consensus decision was made following two months of meetings. Initial resistance was overcome by intensive team building and by sending managers to the University of Tennessee's Institute of Productivity and Quality. The company's employee-involvement commitment and its process for consensus decision making are now part of the Harley culture.

Learning Objectives Checklist

1. All organizations must change because of forces in the external and internal environments. Although more environmental change usually requires more organizational change, organizations can exhibit too much change as well as too little. Organizations can change goals and strategies, technology, job design, structure, processes, culture, and people. People changes should almost always accompany changes in other factors.
2. Organizations learn through the acquisition, distribution, and interpretation of knowledge that already

exists but is external to the organization, and through the development of new knowledge that occurs in an organization primarily through dialogue and experience. *Learning organizations* have systems and processes for creating, acquiring, and transferring knowledge throughout the organization in order to modify and change behaviour.

3. The general change process involves unfreezing current attitudes and behaviours, changing them, and then refreezing the newly acquired attitudes and behaviours. Several key issues or problems must be dealt with during the general change process. One is accurate diagnosis of the current situation. Another is the resistance that might be provoked by

unfreezing and change. A third issue is performing an adequate evaluation of the success of the change effort. Many such evaluations are weak or nonexistent.

4. Organizations can deal with resistance to change by being supportive, providing clear and upfront communication about the details of the intended change, involving those who are targets of the change in the change process, and by co-opting reluctant individuals by giving them a special or desirable role in the change process or by negotiating special incentives for change. Transformational leaders are particularly adept at overcoming resistance to change.
5. Organizational development (OD) is a planned, ongoing effort to change organizations to be more effective and more human. It uses the knowledge of behavioural science to foster a culture of organizational self-examination and readiness for change. A strong emphasis is placed on interpersonal and group processes.
6. Four popular OD techniques are team building, survey feedback, total quality management, and reengineering. *Team building* attempts to increase the effectiveness of work teams by concentrating on interpersonal processes, goal clarification, and role clarification. *Survey feedback* requires organizational members to generate data that are fed back to them as a basis for inducing change. *Total quality management* (TQM) is an attempt to achieve continuous improvement in the quality of products or services. *Reengineering* is the radical redesign of organizational processes to achieve major improvements in time, cost, quality, or service.
7. The careful evaluation of OD programs poses special challenges to researchers. OD efforts involve a complex series of changes so it is difficult to know exactly what changes produce changes in processes or outcomes. Novelty effects or the fact that participants receive special treatment might produce short-term gains that really do not persist over time. Self-reports of changes after OD might involve unconscious attempts to please the change agent, and organizations may be reluctant to publicize failures.
8. *Innovation* is the process of developing and implementing new ideas in an organization. It can include both new products and new processes. Innovation requires individual creativity and adequate resources and rewards to stimulate and channel that creativity. Also, *idea champions* who recognize and sponsor creative ideas are critical. Finally, internal and external communication is important for innovation. The role of gatekeepers who import and disseminate technical information is especially noteworthy.
9. Innovations will diffuse most easily when they are not too complex, can be given a trial run, are compatible with existing practices, and offer a visible advantage over current practices. Factors that can hurt diffusion include a lack of support and commitment from top management, reward systems that focus on traditional performance and ignore success at implementing innovation, union resistance, and conflict between pilot projects and the bureaucratic structures in the rest of the organization.

FLASHBACK

Emotions and Organizational Change

As you know from reading this chapter, organizational change programs are often met with a great deal of resistance to change. Thus, managers must be able to create positive attitudes towards change among members of an organization. But how successful are managers at creating positive attitudes towards organizational change programs, and how should they persuade employees to change?

As it turns out, managers are not very effective when it comes to managing change. Perhaps not surprisingly, many organizational change programs fail. This is largely due to a failure to obtain the acceptance, support, and commitment of organiza-

tional members and to overcome resistance to change.

In Chapter 4, we described attitudes as “a fairly stable emotional tendency to respond consistently to some specific object, situation, person, or category of people.” We also noted that attitudes are a function of what we think and what we feel, or a product of a related belief and value. Attempts to change attitudes usually involve some form of persuasion to modify the beliefs and/or values of an audience.

When it comes to change programs, however, managers tend to focus on the belief component of

FLASHBACK

(continued)

attitude change rather than the feeling or emotional component. In other words, they emphasize the cognitive or thinking components of attitude change by using rationale arguments (e.g., why the change is needed, facts and information regarding the problems of the present situation, opportunities and benefits of the change program, etc.). However, persuading employees to accept change and overcoming resistance to change requires employees' emotional involvement. A focus on only the rational elements of change means that employees might remain *emotionally* resistant to change. Furthermore, the emotional aspects of a change effort are often more important and relevant than the cognitive aspects.

How can managers appeal to employees' emotions when promoting organizational change programs? Shaul Fox and Yair Amichai-Hamburger describe a number of methods for using emotions during the organizational change process. First, they suggest including emotions in the content of change messages. For example, managers should use words with strong negative emotional connotations, such as *danger*, *loss*, *unpleasantness*, and *risk* to describe the consequences of not implementing a change program, and positive words such as *comfortable*, *convenient*, *success*, *progress*, *pleasure*, and *relief* to describe the future after a change program has been implemented. Managers can also use metaphors that evoke positive feelings and emotions for a change program. Positive organizational metaphors (e.g., family) can be used to create a strong sense of caring and support during the change process.

Second, managers should use different modes of communication to evoke emotions toward a change program, such as pictures, slogans, music, and colours. The use of humour is also recommended because it can create a pleasant atmosphere, generate good feelings, gain people's attention, and show that the change agents are human, thus bridging the distance between managers and employees. Managers should also display their own emotions when communicating with employees

about a change program—by smiling and by exhibiting enthusiasm, warmth, pride, and confidence in the change program.

Third, managers should allow employees to express their views and should be fair, honest, and sympathetic in their treatment of employees during the change process. This helps in the development of positive emotions towards change and can lower employees' resistance. By allowing employees to voice their objections, negative emotions can be changed to positive feelings toward a change program.

A final method of appealing to employees' emotions is by creating pleasant settings that arouse positive emotions for change. One way to do this is through the use of ceremonies that celebrate the introduction of a change program and significant changes. Ceremonies should be held in dignified and pleasant surroundings and should include decorations and adornments to enhance the sense of importance and positive aspects of a change program. In addition, information about change programs should be provided in pleasant, intimate, convenient, and aesthetic surroundings. This helps to create linkages between the pleasant environment, positive emotions, and the change program.

Finally, recall from Chapter 4 the discussion of Affective Events Theory which states that events and happenings in the workplace have the potential to provoke emotions and moods, depending on how the events and happenings are appraised. Change programs are one type of organizational event that is sure to evoke very strong emotions. Therefore, managers should incorporate emotional elements of persuasion into their messages about change programs in order to create positive emotions toward change, to obtain employee acceptance and support for change initiatives, to minimize resistance to change, and to improve the chances of success.

Source: Fox, S., & Amichai-Hamburger, Y. (2001). The power of emotional appeals in promoting organizational change programs. *Academy of Management Executive*, 15, 84–95.

Discussion Questions

1. Describe an example of resistance to change that you have observed. Why did it occur?
 2. You have been charged with staffing and organizing an R&D group in a new high-technology firm. What will you do to ensure that the group is innovative?
 3. What qualities would the ideal gatekeeper possess to facilitate the communication of technical information in his or her firm?
 4. Suppose a job enrichment effort in one plant of a manufacturing firm is judged to be very successful. You are the corporate change agent responsible for the project, and you wish to diffuse it to other plants that have a similar technology. How would you sell the project to other plant managers? What kinds of resistance might you encounter?
 5. What personal qualities and skills would be useful for an OD change agent to possess? Describe the relative merits of using an internal staff change agent versus an external consultant.
 6. Discuss: The best organizational structure to generate innovative ideas might not be the best structure to implement those ideas.
 7. Discuss some of the things that an organization can do to improve organizational learning and to become a learning organization. What should organizations know about the linkages between organizational learning and change and innovation?
 8. Debate this statement: Survey feedback can be a problematic OD technique because it permits people who are affected by organizational policies to generate data that speak against those policies.
- to improve an organization's ability to learn and/or generate and implement innovative ideas that combines organizational learning practices (Chapter 2), pay systems (Chapter 6), and socialization methods (Chapter 8). What effect does organizational culture have on an organization's ability to learn and innovate?
3. Review the chapter opening vignette on Hewlett-Packard and identify some of the most relevant issues that have been covered in previous chapters. In particular, consider the vignette in terms of some of the following topics: (1) Perceptions (Chapter 3), (2) Motivation theories and practices (Chapters 5 and 6), (3) Culture (Chapter 8), (4) Leadership (Chapter 9), (5) Power and politics (Chapter 12), (6) Conflict (Chapter 13), (7) Organizational structure (Chapter 14), and (8) Strategy and strategic responses (Chapter 15).

Experiential Exercise

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Integrative Discussion Questions

1. Do leadership, organizational culture, and communication influence the effectiveness of organizational-change programs? Discuss the effect that leadership behaviour, strong cultures, and personal and organizational approaches to communication have on the change process and change problems. What should organizations do in terms of leadership, culture, and communication in order to overcome problems and ensure that the change process is effective?
2. How can organizational learning practices, pay, and socialization influence organizational learning and innovation in organizations? Design a program

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became concerned that his cheap imitations would not be enough to maintain the company's current success. George decided to call a meeting with all the company's managers to express his concerns. He told them that Dandy Toys must change and become more innovative in its products. Rather than just knock off other companies' toys, he told the managers that they must come up with creative and innovative ideas for new and more upscale toys. "By the end of this year," George told the managers, "Dandy Toys must begin making its own in-house designed quality toys." When the managers left the meeting, they were surprised, and some were even shocked, about this new direction for Dandy Toys.

Although a few of the managers suggested some ideas for new toys during the next couple of months, nobody really seemed interested. In fact, business pretty much continued as always at Dandy Toys, and by the end of the year not a single new in-house toy had been made.

1. Comment on the change process at Dandy Toys. What advice would you give the president about how to improve the change process? What are some of the things that might be changed at Dandy Toys as part of the change process?
2. Why wasn't the innovation process more successful at Dandy Toys, and what can be done to improve it?
3. Consider the relevance of organizational learning for change and innovation at Dandy Toys. What should the company do to improve learning and will this help to create change and improve innovation?

Case Study

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Case Incident

Dandy Toys

Company president George Reed had built a successful toy company called Dandy Toys, which specialized in manufacturing inexpensive imitations of more expensive products. However, with increasing domestic and global competition, he

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Integrative Case

Ace Technology

At the end of Part Three of the text, on Social Behaviour and Organizational Processes, you answered a number of questions about the Ace Technology Integrative Case that dealt with issues related to culture, leadership, communication, and decision making. Now that you have completed Part Four of the text and the chapters on The Total Organization, you can return to the Ace Technology Integrative Case and enhance your understanding of some of the main issues associated with the total organization by answering the following questions.

Questions

1. Describe the external environment and its influence on Ace Technology.
2. Describe Ace Technology's response to uncertainty and resource dependence. How effective do you think its response will be, and what are some other strategic responses that it might consider?
3. Consider the concept of organizational change. Does Ace Technology need to change? Why or why not?
4. Discuss the change process and issues in relation to the new programs at Ace Technology. How effectively have the three basic stages been conducted and the main issues managed?
5. Consider the issue of resistance to change at Ace Technology. What factors explain the degree of resistance toward the new strategy and compensation program at Ace Technology?
6. How effective do you think the new compensation program will be for generating and implementing innovative ideas? What else can Ace Technology do to improve innovation?